Massachusetts Water Resources Authority
Remote Headworks Upgrade Design and Construction Administration Services, MWRA Contract No. 7206

Risk Based Disposal Plan – Chelsea Creek Headworks

Appendix C

- Sections of Hazardous Building Materials Evaluation, March 2011 – **CD only**

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

Massachusetts Water Resources Authority

Remote Headworks Upgrades Design and Construction Administration Services
MWRA Contract No. 7206

Final Hazardous Building Materials Evaluation

March 2011

Report Prepared By:

Malcolm Pirnie, Inc.

200 Harvard Mills Square
Suite 430
Wakefield, MA 01880
781-224-4488

01740453.0000

The Water Division of ARCADIS

Contents

List of Tables

Appendices

1. Work Plan

1.1. Approach

The purpose of this memorandum is to present the findings and recommendations of the Hazardous Building Materials Evaluation conducted for the Massachusetts Water Resources Authority (MWRA) at three Remote Headworks facilities; namely, Chelsea Creek, Columbus Park, and Ward Street. The evaluation was conducted in accordance with the Subtask 4.8.1 Work Plan prepared by Malcolm Pirnie, Inc. (Pirnie) in November 2010.

As stated in the Work Plan, the evaluation was conducted to identify, sample, and analyze hazardous building materials present in the three headwork facilities to be upgraded, and when possible, to quantify these materials. The tasks performed to complete the evaluation included the following:

- Visual inspections of the three facilities for lead, asbestos containing materials (ACMs), polychlorinated biphenyls (PCBs), mercury components, oil and greases, and other materials potentially requiring special handling and disposal;
- X-ray fluorescence (XRF) testing for lead-based paint (LBP);
- Sampling and laboratory analysis of representative building materials for lead, asbestos, and PCBs; and
- Prepare technical report summarizing the findings of the inspection and testing program.

1.2. Facility Inspections

On November 29th, 30th, and December 1, 2010, R.I. Analytical Laboratories (RIAL) and Environmental Lead Detection (ELD) personnel under the direction of Malcolm Pirnie, Inc. personnel conducted a limited ACM inspection and LBP inspection via XRF with additional lead bulk sampling at Chelsea Creek, Columbus Park, and Ward Street. The goal of the inspections was to identify accessible ACM, PCB materials and lead components within the buildings and recognize potential liabilities associated with potential future renovations and upgrades to the buildings.

The ACM inspection included a visual inspection of all accessible building locations with suspect ACM to determine its condition and friability, identifying all homogenous accessible ACM, and if appropriate, collection of bulk material samples for lab analysis.

The evaluation also included a visual inspection for other potential hazardous building materials such as fluorescent lights, thermostats, mercury switches, and hydraulic and mechanical equipment, and other potential hazardous material sources.

Photographs taken during the facility inspections are provided as Appendix A.

1.3. Sampling Locations & Rationale

Representative ACM, PCB, and LBP samples were collected from each of the three headworks facilities; namely, Chelsea Creek, Columbus Park, and Ward Street. PCB and LBP sampling location priority was placed on paint colors and surfaces that would most likely be PCB containing due to type of usage and application. Secondly, attempts were made to collect samples of colors and surfaces that encompassed large portions of the building (i.e., red floor, white ceiling) to get a better overall indication of scope for the upgrade project. Sampling was an overview of the most common paints and caulks that could contain PCB's. LBP location selection was further governed so as to minimize any potential background interferences, i.e., pipes in bathroom wet walls. LBP paint chip location was further defined by the location of positive results (≥1.0 mg/cm^2) of the XRF testing described below.

Sampling was not performed on building components that would impact structural, mechanical, or electrical systems. Undamaged fire doors were scanned for the presence of lead with the XRF; however, they were not physically sampled so not to void the fire protecting ability of the door. Every effort was made to conduct a thorough survey of all accessible building materials. Limiting factors included accessibility, visibility, and avoidance of key operating components. Areas identified as not accessible included inside wall cavities, confined spaces, and operating machinery. In addition, no samples of roofing were collected at this time. The roof of each facility was overlaid with a foam core and epoxy coating, and there was no way of ensuring the integrity of any patch on this type of roofing without direction from the roof installation contractor. It is recommended that sampling be coordinated with proposed repairs of the roofing surface.

1.4. Testing Procedures

Under current State and Federal HUD guidelines, the XRF analyzer is a recognized method of in-situ lead paint testing designed to measure lead in paint coatings on various surfaces per area, to aid in the proper handling and abatement of these materials. Initial in-situ lead paint testing was conducted using a Radiation Monitoring Devices (RMD) LPA-1, Lead in Paint Spectrum Analyzer, Serial #1032. In general, XRF testing within the building survey areas included testing all surfaces representing a single substrate in a series to measure and subsequently avoid large "swings" in the readings. Measurements within an area began

with the densest substrate present and proceeded to the least dense (e.g., steel to concrete to plaster to wood).

The field XRF readings (in mg/cm^2) were recorded on data sheets for each room or area tested. The forms identify the room, component, substrate, color, test location, XRF reading and positive or negative. These raw data forms are included as Appendix B and the results are summarized below.

1.5. Regulatory Requirements

Lead: LBP debris may be generated when any of the components of the buildings coated with LBP are removed or demolished during the proposed building renovations. Examples of these components that may be encountered include ceiling, wall and floor paints, stair rails, door trim, windows and trim (including caulking), siding and trim work. All removal operations with the potential to disturb materials that tested positive for lead would be subject to the Occupational Safety and Health Administration (OSHA) Lead in Construction Standard: 29 CFR 1926.62 for worker protection, as well as any other applicable federal, state, and local regulations including Massachusetts Hazardous Waste Regulations specific to disposal requirements. The OSHA definition of LBP is any detectable concentration of lead by Atomic Absorption Spectrometry (AAS) or XRF. OSHA does not give a quantity definition for lead based paint but measures the hazards based upon a permissible exposure limit in the air of 50 micrograms per cubic meter ($\mu g/m^3$) over an eight-hour exposure no matter what level of lead is determined to be in the paint. The Massachusetts Lead Law applies to residential structures, daycares, or school buildings with children present and therefore does not apply to industrial operations as is our case.

ACMs: Building materials containing less than one percent asbestos do not meet either the generally accepted industry definition of ACM (any material containing greater than one percent asbestos) or the EPA definition of friable ACM (any friable bulk insulation material contain greater than one percent asbestos by weight as analyzed by Polarized Light Microscopy [PLM].) However, According to Massachusetts Department of Environmental Protection (MassDEP) regulations material containing 1% asbestos fibers or more by weight is regulated. If asbestos is in good condition and it does not pose a health hazard, no laws or regulations require that it be removed. All residential, commercial and institutional buildings are subject to Massachusetts Department of Environmental Protection (MassDEP) asbestos regulations at 310 CMR 7.15. Therefore, owners and/or operators (e.g. building owners, renovation and demolition contractors, plumbing and heating contractors, flooring contractors, etc.) need to determine all asbestos containing materials (both non-friable and friable) that are present at the site and whether or not those materials will be impacted by the proposed work prior to conducting any renovation or demolition activity. In addition,

DEP requires notification for any asbestos handling project including demolition and disposal at least ten (10) working days prior to conducting any asbestos removal work.

PCBs: PCBs in paint are regulated in accordance with the Toxic Substances Control Act (TSCA) PCB regulations in 40 CFR 761. In accordance with 40 CFR 761.3, PCB-containing paint and caulk are considered *PCB bulk product waste* if the concentration of PCBs in the paint or caulk is greater than or equal to (>) 50 ppm. The use of paint and caulk with PCB concentrations equal to or greater than 50 ppm is not authorized for use and must be disposed of as PCB bulk product waste according to 40 CFR 761.62. The cleanup of any porous or non-porous building surfaces contaminated by this paint and caulking would be governed by 40 CFR 761.61. The disposal requirements for PCB contaminated building materials are regulated under 40 CFR 761.62.

High occupancy area is defined as any area where PCB remediation waste has been disposed of on-site (unauthorized use) and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: 840 hours or more (an average of 16.8 hours or more per week) for non-porous surfaces and 335 hours or more (an average of 6.7 hours or more per week) for bulk PCB remediation waste. For buildings that are continuously staffed, high-occupancy cleanup standards would apply: 1 ppm for porous surfaces such as concrete, grout and masonry and 10ug/100cm^2 for non-porous surfaces such as metal. For low occupancy buildings, cleanup standards of 25ppm for porous surfaces, and 100 ug/100 cm^2 would apply.

In accordance with 40 CFR 761.3, paint and caulking materials that are contaminated with PCBs at concentrations less than 50 ppm are considered "Excluded PCB products" and are therefore not regulated. However, the extent and condition of these materials should be well documented.

Clean up levels were also evaluated for the potential implication of non-staffed facilities in the future. Based on our understanding of the future operating parameters of the headwork facilities during dry weather, an operator would visit each of the headworks for approximately 1-hour per shift, and three (3) shifts per day for an estimated total of 21 hours per week, which exceeds the 16.8 hours or more high occupancy threshold. During wet weather events, it is our current understanding that these facilities will be fully staffed during these events. Therefore, the wet weather occupancy condition is variable from year to year; however, our average rainfall is over 40-inches per year and would conservatively result in a high occupancy condition.

2. Chelsea Creek Headworks Hazardous Building Materials Evaluation

2.1. Sample Collection

2.1.1. Lead Based Paint (LBP)

A total of 571 readings were taken during the XRF screening of the three buildings, including a total of 138 readings from Chelsea Creek. Forty-one (41) of the 138 readings, (approximately 30%) tested positive for lead, indicating that the painted surfaces contained lead-base paint. Information collected for each sample point included the specific building level/room location, specific component, substrate, color, recorded XRF value and whether a positive or negative reading resulted. Testing locations exhibiting positive results for LBP (≥1.0 mg/cm^2) are summarized in Table 2-1. The Lead Based Paint XRF Data Sheets summarizing all test points are provided in Appendix B.

Table 2-1:
Summary of XRF Testing - Chelsea Creek Headworks

Interior Surfaces

Room	Component	Substrate	Color	XRF (mg/cm^{2})	Pos/Neg
Grade Level -2	Wall	Ceramic Tile	Tan	5.3	Pos
Grade Level -2	Wall Beam	Metal	Gray	1.6	Pos
Grade Level -2	Support Column	Concrete	White	1	Pos
Grade Level -2	Sink	Metal	White	1	Pos
Grade Level -2	Air Pipes	Metal	Red	1	Pos
Grade Level -2	I-Beam	Metal	Yellow	2.3	Pos
Grade Level -1	Elevator Door Frame	Metal	Gray	1	Pos
Grade Level -1	Pipe 16"	Metal	Blue	1.8	Pos
Grade Level -1	Hatch Door	Metal	Black	1	Pos
Grade Level -1	Air Pipes	Metal	Red	1	Pos
Grade Level -1	Hydraulic Pump	Metal	Red	1	Pos
Grade Level -1	Pipe 2"	Metal	Blue	2.3	Pos
Grade Level -1	Sink	Metal	Gray	1	Pos
Grade Level -1	Pipe 8"	Metal	Blue	1	Pos
Grade Level -1	Pipe 20"	Metal	Gray	1	Pos
Level 1-Staircase	Wall	Ceramic Tile	Tan	5.2	Pos
Level 1-Staircase	Door	Metal	Gray	9.9	Pos
Level 1-Bath	Wall	Ceramic Tile	Green	2.8	Pos
Level 1-Bath	Door	Metal	Gray	5.7	Pos
Level 1-Lounge	Wall	Ceramic Tile	Green	2.9	Pos
Level 1-Lounge	Door	Metal	Gray	9.9	Pos
Level 1-Lounge	Pipe 8"	Metal	Gray	1	Pos
Level 1-Boiler Room	Wall	Ceramic Tile	Gray	2.4	Pos
Level 1-Control Room	Door	Metal	Gray	4.9	Pos
Level 1-Scrubber Rm	Air Tank Feed	Metal	Green	1	Pos
Level 2	Door Frame	Metal	Gray	1	Pos
Level 2	Elevator Door Frame	Metal	Gray	1	Pos
Level 2 - Locker Rm	Wall	Ceramic Tile	Green	1.8	Pos
Level 2 - Locker Rm	Door	Metal	Gray	6.9	Pos
Level 2 - Locker Rm	Door Frame	Metal	Gray	1	Pos
Level 3	Door	Metal	Gray	9.9	Pos

Table 2-1 (continued):
Summary of XRF Testing - Chelsea Creek Headworks

Exterior Surfaces

Room	Component	Substrate	Color	XRF (mg/cm^{2})	Pos/Neg
Roof	Partition Support Beams	Metal	Gray	1	Pos
Roof	Platform I-Beam	Metal	Gray	1	Pos
Roof	Platform Railing	Metal	Gray	1	Pos
Roof	Platform Support Column	Metal	Gray	1.5	Pos
Building	Wall	Ceramic Tile	Tan	2.3	Pos
Building	Door Frame	Metal	Gray	2.2	Pos
Building	Pipe	Metal	Yellow	3.2	Pos
Building	Wall Corner Guard	Metal	Yellow	1.8	Pos
Building	Tower	Metal	Red	3.5	Pos
Building	Lamp Post	Metal	Black	1	Pos

BLDG Levels Key:
Level 1 - Main Floor
Level 2 - One floor above Main Floor
Level 3 - Two floors above Main Floor
Grade Level -1 - One floor below Main Floor
Grade Level -2 - Two floors below Main Floor

Based on the XRF reading results for lead and visual observations, confirmatory paint chip samples of similar homogenous surfaces representing the largest surface painted areas and/or areas where the XRF readings were close or slightly above the 1.0 mg/cm^2 threshold were collected for laboratory analysis. A total of twelve (12) paint chip samples (approximately 30% of XRF positive hits) were collected from Chelsea Creek and submitted to RIAL's in-house laboratory for analysis of total lead by method SW-846 6010. Analytical results are presented in Section 2.2.

2.1.2. Asbestos Containing Material (ACM)

RIAL personnel collected a total of seventy-four (74) asbestos bulk samples during the inspection of the three buildings, including collection of a total of thirty-two (32) samples from Chelsea Creek. These samples were then submitted to RIAL's in-house laboratory for analysis via Polarized Light Microscopy (PLM) by EPA/600/R-93/116, July 1993 edition. Samples containing confirmed asbestos materials (≥1.0% asbestos

fibers by weight) are summarized in Table 2-2 (Appendix C). Analytical results are presented in Section 2.2.

2.1.3. Polychlorinated Biphenyls (PCBs)

RIAL personnel collected a total of fifty-five (55) PCB samples during the inspection of the three buildings, including collection of a total of seventeen (17) samples from Chelsea Creek. These samples were then submitted to RIAL's in-house laboratory for analysis via method SW-846-8082. Sample results are summarized in Table 2-2 (Appendix C). Analytical results are presented in Section 2.2. The analytical laboratory report is provided in Appendix D.

2.1.4. Other Miscellaneous Building Materials

Fluorescent Light Bulbs/Thermostats: Fluorescent light bulbs were identified throughout the buildings. If slated for disposal, these items will need to be removed, containerized, and disposed of in compliance with all state and federal regulations. The bulbs which contain mercury must be shipped to and recycled at an approved facility. Mercury containing switches were identified in all of the buildings (see photos in Appendix A). Switches must be segregated, properly containerized and properly disposed of adhering to all federal regulations.

Hydraulic Oil/Motor Oil: Throughout all buildings various containers and drums of hydraulic and motor oil were observed. All observed containers were either on spill pads or within contained areas to collect spilled oil. Hydraulic pistons were observed in lower levels of all facilities. All of these items would need to be drained and disposed of in accordance with State and Federal Regulations. A review of the MSDS sheets for the facility indicated that Hydraulic oil is Fleetline A W32. Upon speaking with plant personnel, it was determined that fluid is routinely replaced as part of a regular maintenance schedule. See photos in Appendix A for examples.

Miscellaneous Items: Miscellaneous items such as exit signs, emergency lighting and door pistons, cleaners, paints, solvents, hydraulic oil, etc. must be removed/reclaimed recycled/disposed of in a manner appropriate for each material. Packing and disposal of some items may differ depending on chosen waste facilities requirements. Therefore, coordination should be made with appropriate waste facilities.

2.2. Analytical Results

2.2.1. Lead Based Paint (LBP)

LBP was detected above detection limits in all twelve (12) paint chip samples collected from Chelsea Creek ranging in concentration from 0.003 to 12 percent (%) by weight or (30 to 120,000 milligrams per kilogram [mg/kg] or parts per million [ppm]). Table 2-2 summarizes the analytical results, and the analytical laboratory report is included in Attachment D.

2.2.2. Asbestos Containing Material (ACM)

ACM was detected at a concentration of ≥1% asbestos fibers by weight in ten (10) of the 32 total samples (approximately 31 %) collected from Chelsea Creek ranging from 1% to 25% Chrysotile. Two additional samples (010, 011) of exterior window caulk were detected at <1% Chrysotile. Although this caulking tested negative for asbestos, in general, caulking in poor condition should be considered for replacement during renovations. Table 2-2 summarizes the analytical results, and the analytical laboratory report is included in Attachment D.

2.2.3. Polychlorinated Biphenyls (PCBs)

PCBs were detected above analytical detection limits in twelve (12) of the seventeen (17) samples collected from the Chelsea Creek facility. The detected PCB compounds included Aroclor-1016, Aroclor-1254, and Aroclor-1260. Total PCB concentrations detected ranged from 2 mg/kg to 24,100 mg/kg. Table 2-2 summarizes the analytical results, and the analytical laboratory report is included in Attachment D.

2.3. Findings

2.3.1. LBP:

Chelsea Creek had a number of building materials that contained elevated levels of Lead (Tables 2-1 and 2-2). These materials included all the components identified by XRF in Table 2-1 and the following paint coatings (Table 2-2):

- Main Floor – Generator room flooring (Sample No. 003) and coating on air handling tank (Sample No. 011) in Scrubber Room.
- Sub Level One below Main Floor (-1) – White wall paint (Sample No. 007), White paint on bricks (Sample No. 008), gray paint on slop sink (Sample No. 009), aqua paint on 2-in. pipe (Sample No. 004), red paint on pistons (Sample No. 012).
- Sub Level Two below Main Floor (-2) – Red EMT piping (Sample No. 002), red brick (Sample No. 005), and yellow monorail (Sample No. 006).
- First Level above Main Floor (+2) - Locker room door frame (Sample No. 001).

- Exterior – Orange paint on tower (Sample No. 010).

All removal operations with the potential to disturb any materials that tested positive for lead would be subject to the Occupational Safety and Health Administration (OSHA) Lead in Construction Standard: 29 CFR 1926.62 for worker protection.

2.3.2. ACM:

Chelsea Creek had a number of materials that contained >1% ACM and would require remediation if disturbed during the renovations (Table 2-2). These materials included the following:

- Exterior Siding – (corrugated metal) (Sample Nos. 002 & 003).
- Caulking – caulking between exterior siding panels (Sample No. 009), caulking on roof penthouse (Sample No. 001) and around exterior doors (Sample No. 013).
- Misc. Fittings & elbows (Sample Nos. 004 & 006).
- Tar Paper – on interior walls throughout upper levels (Sample Nos 029 & 030).
- Mastic – second floor locker room (Sample No. 032).

All of these materials will require removal and disposal in compliance with applicable regulations during renovations.

2.3.3. PCBs:

Chelsea Creek had a number of paints and caulks that contained elevated levels of PCB's contents above the 50 ppm regulatory limit (Table 2-2) including the following:

- Sub Level One below Main Floor (-1) – Elevator frame(Sample No. 016).
- Sub Level Two below Main Floor (-2) – White paint on walls (Sample No. 005) and red floor paint (Sample No. 011), and white column paint (Sample No. 014).
- Second Level above Main Floor (+3) – White pain on ceiling (Sample No. 012).
- Exterior – yellow garage door (Sample No. 017) caulking around lower front louver of building facade (sample 010), and caulking on roof penthouse (Sample No. 001).

In general, most of the subject paints were pervasive throughout the building, and in generally poor condition. PCB caulk located on the exterior of the building is in a degraded state from weathering.

2.4. Recommendations

1. Additional PCB Sampling & Analysis – It is recommended that a second round of paint chip samples be collected and analyzed for PCBs from the painted porous surfaces on all levels of the building with elevated PCB levels (>50 ppm). The additional testing will be used to better quantify the area of PCB contaminated materials that may require cleanup and assist in preparation of the specifications. In addition an assessment of damage to painted surfaces and potential debris on horizontal surfaces should be performed.

   It should be noted that if PCBs have contaminated either the surrounding building materials (in most cases porous concrete) or adjacent soil, these materials are considered PCB remediation waste as well. PCB remediation waste is subject to the cleanup and disposal requirements according to 40 C.F.R. § 761. Therefore, it is also recommended that upon completion of the second round of sampling, a third phase be conducted where representative core samples of any porous substrates (i.e., concrete) below the paint coating should be collected and analyzed for possible PCB contamination in accordance with TSCA regulations.

2. Additional Sampling and Analysis of Roof Materials: - No samples of roofing were collected at the time of the facility inspection. Upon visual inspection of the roof, it was determined to be overlaid with a foam core and epoxy coating. Because there was no way of ensuring the integrity of any temporary patch on this type of roofing, it is our suggestion that collection of roofing samples be coordinated with the timing of proposed repairs to the roof coating by the roofing contractor.

3. Recommendations for Lead Control: - Contractors performing work within the building should be made aware of the potential lead hazards identified in Section 2 above, so that appropriate steps can be made to limit exposure. Under applicable OSHA regulations, if any proposed development plan involves disturbing lead-containing paint (sanding, welding, scraping, grinding, etc.) in a way to create fine mists, fumes, or fine particulate aerosols which could be inhaled or ingested by site workers, the proposed construction plans should be reviewed by a qualified individual to evaluate compliance to OSHA Lead in Construction Standard: 29 CFR 1926.62 for Lead, state, and local regulations.

Massachusetts Water Resources Authority

Remote Headworks Upgrades Design and Construction Administration Services
MWRA Contract No. 7206

Task 4.8 - Hazardous Building Materials Evaluation

Appendix A
Facility Photographs

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Appendix A – Facility Photographs

White column and ceiling paint at Chelsea Facility

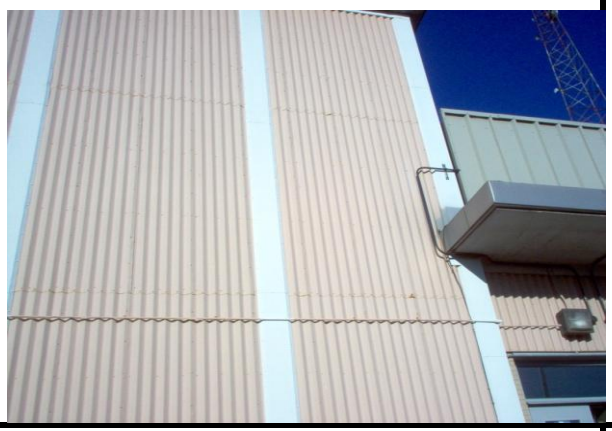
Red floor paint in Chelsea Facility

PCB Caulk around louvers Chelsea Facility

Damaged white ceiling paint Level -1 Mezzanine Chelsea Facility

White PCB wall paint covering asbestos tarpaper 2nd level of Chelsea Facility

PCB containing Blue Garage Doors
Backside of Ward St.



Asbestos exterior siding with asbestos caulk Between panels at Chelsea Creek Facility

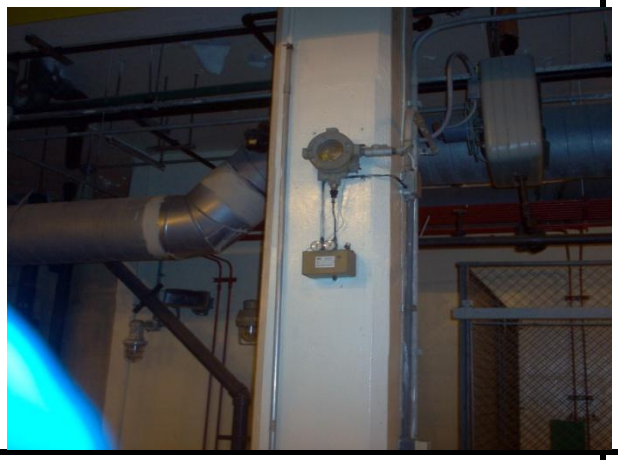
Asbestos Containing Exterior window and door caulking locations at Chelsea Creek Facility

Exterior containing mastic under floor in the 2nd Floor Locker Room at Chelsea Creek

Tarpaper on walls in the 2nd and 3rd Levels of the building at Chelsea Creek.

Overview of asbestos caulk on cement panels on exterior at Columbus Park

Close up of asbestos caulk in between cement panels



Mercury containing switches at all three sites.

Mercury containing bulbs in all three sites.

Door pistons – possible PCB contaminants.

Hydraulic Oil and Fluids at all three sites.

Oils on spill pads at all three sites.

Hydraulic Oil and Fluids at all three sites.

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MWRA Contract No. 7206
Task 4.8 - Hazardous Building Materials Evaluation

Appendix C
Summary Tables of Analytical Data

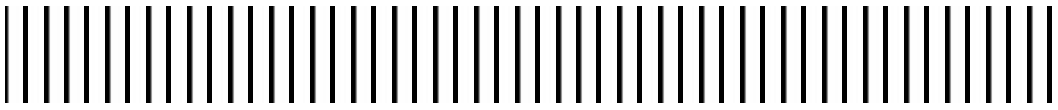

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Table 2-2
Lead, Asbestos, and PCB Analytical Results - Chelsea Creek
Massachusetts Water Resources Authority
Hazardous Building Materials Evaluation

		Chelsea Creek - Lead											
Sample Number		001	002	003	004	005	006	007	008	009	010	011	012
Sample Description		Locker Room Frame Grey +2	Red EMT piping -2	Generator Room Flooring 0	2" Aqua Paint -1	Red Brick / Brown CMU -2	Yellow Monorail -2	White Wall -1	White Paint on Brick /Elev -1	Grey Paint on Slop Sink -1	Orange Tower Ext	Air Receiving Tank 0	Red Paint on Piston -1
Sample Collection Date		11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10
INORGANIC PARAMETERS													
Lead	% (by weight)	0.316	0.47	0.173	1.41	0.003	6.3	0.893	0.922	0.007	12	1.21	1.1
	(mg/kg)	3160	4700	1730	14100	30	63000	8930	9220	70	120000	12100	11000

		Chelsea Creek - PCBs																
Sample Number		001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017
Sample Description		Caulk on Penthouse	Gray Caulk on Air Supply	Densil Tape	Ext. Window Caulk	Wall White - 2	Ext. Caulking around Brick 0	Aqua Paint -1	Red Epoxy Floor - 2	Ext. Gasket/Gromm	Caulk Front Louver	Red Floor Paint	White Ceiling Paint 3	Ext. Spacer	Contour Paint White - 2	Yellow Mono Roll - 2	Elev. Frame - 1	Ext. Yellow Garage Door
Sample Collection Date																		
PCBs (mg/kg)		11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010	11/29/2010
Aroclor-1016		ND[20]	ND[8]	ND[2]	ND[3]	ND[50]	ND[1]	ND[5]	ND[1]	ND[4]	ND[10]	ND[9]	8	ND[2]	1200	ND[1]	ND[100]	ND[40]
Aroclor-1254		240	ND[8]	ND[2]	ND[3]	1100	ND[1]	ND[5]	21	ND[4]	57	240	87	ND[2]	15000	ND[1]	3100	630
Aroclor-1260		180	ND[8]	ND[2]	36	560	ND[1]	ND[5]	15	ND[4]	34	58	18	ND[2]	7900	2	1500	1000
All remaining PCBs		ND[20]	ND[8]	ND[2]	ND[3]	ND[50]	ND[1]	ND[5]	ND[1]	ND[4]	ND[10]	ND[9]	ND[1]	4	ND[400]	ND[1]	ND[100]	ND[40]
Total		**420**	0	0	36	**1660**	0	0	36	0	**91**	**298**	**113**	4	**24100**	2	**4600**	**1630**

BOLD - indicates exceedance of regulatory limit of 50 ppm.

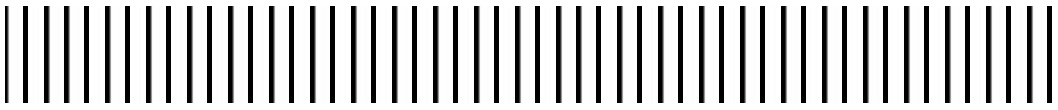
		Chelsea Creek - ACM															
Sample Number		001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017
Sample Description		Caulk on Penthouse	siding ext.	siding ext.	TSI fitting	Gray Caulk -1 level	TSI Elbow	Wrap on Pipe	Linoleum - 1st Fl.	Caulk between panels	ext. window caulk	ext. window caulk	gromit	door caulk	filler behind siding	light weight concrete	ext. window caulk	Expansion Caulk
Sample Collection Date		11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10
Asbestos		Positive	Positive	Positive	Positive	Negative	Positive	Negative	Negative	Positive	Negative	Negative	Negative	Positive	Negative	Negative	Negative	Negative
Chrysotile, %		1-5	5-15	5-15	15-25	0	30-40	0	0	5-15	<1	<1	trace	5-15	0	0	0	0
Non-fibrous, %		95-99	85-95	85-95	85-95	100	60-70	100	100	85-95	>99	>99	100	85-95	100	100	100	100
Sample color		Gray	Gray	Gray	Gray	Gray	Gray	Brown	Green	Brown	White	White	Black	Gray	Black	Tan	Gray	Gray

		Chelsea Creek - ACM (Cont'd)														
Sample Number		018	019	020	021	022	023	024	025	026	027	028	029	030	031	032
Sample Description		Caulk around grates	Brown FT	Mastic	Skim Coat	Plaster Walls	CT	Glue Dab	Fire Stop	Ins. On Breeching	Gray FT	Caulk	Tar Paper	Tar Paper	Grey Tile	Black Mastic
Sample Collection Date		11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10
Asbestos		Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Positive	Positive	Negative	Positive
Chrysotile (glass fiber for negative %)		<1	0	0	0	0	15-25	1-5	0	5-15	0	0	5-15	5-15	0	5-15
Non-fibrous		>99	100	100	100	100	75-85	95-99	100	85-95	100	100	85-95	85-95	100	85-95
Sample color		Tan	Brown	Yellow	Gray	White	Brown	Brown	Red	Gray	Gray	Tan	Black	Black	Gray	Black

Massachusetts Water Resources Authority

Remote Headworks Upgrades Design and Construction Administration Services
MWRA Contract No. 7206
Task 4.8 - Hazardous Building Materials Evaluation

Appendix D
Laboratory Analytical Data Report



MALCOLM PIRNIE

Attachment #2
PCB Results

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Attn: Mr. Joseph Lepore
41 Illinois Avenue
Warwick, RI 02888

Date Received: 12/2/10
Date Reported: 12/14/10
P.O. #: 100843
Work Order #: 1012-23784

DESCRIPTION: PROJECT #100843 CHELSEA HEADWORKS

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 001
SAMPLE DESCRIPTION: 01: CAULK ON PENTHOUSE
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<20	20	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1221	<20	20	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1232	<20	20	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1242	<20	20	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1248	<20	20	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1254	240	20	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1260	180	20	mg/kg	SW-846 8082	12/10/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	91		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	103		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Sample # 002
SAMPLE DESCRIPTION: 02: GRAY CAULK ON AIR SUPPLY
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<8	8	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1221	<8	8	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1232	<8	8	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1242	<8	8	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1248	<8	8	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1254	<8	8	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1260	<8	8	mg/kg	SW-846 8082	12/9/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	61		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	107		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 003
SAMPLE DESCRIPTION: 03: DENSIL TAPE
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<2	2	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1221	<2	2	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1232	<2	2	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1242	<2	2	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1248	<2	2	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1254	<2	2	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1260	<2	2	mg/kg	SW-846 8082	12/9/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	68		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	86		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Sample # 004
SAMPLE DESCRIPTION: 04: EXT. WINDOW CAULK
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<3	3	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1221	<3	3	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1232	<3	3	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1242	<3	3	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1248	<3	3	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1254	<3	3	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1260	36	3	mg/kg	SW-846 8082	12/9/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	42		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	75		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 005
SAMPLE DESCRIPTION: 05: WALL WHITE -2
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<50	50	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1221	<50	50	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1232	<50	50	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1242	<50	50	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1248	<50	50	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1254	1100	50	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1260	560	50	mg/kg	SW-846 8082	12/10/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	32		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	70		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Sample # 006
SAMPLE DESCRIPTION: 06: EXT. CAULKING AROUND BRICK 0
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1221	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1232	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1242	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1248	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1254	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1260	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	70		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	85		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 007
SAMPLE DESCRIPTION: 07: AQUA PAINT -1
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<5	5	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1221	<5	5	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1232	<5	5	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1242	<5	5	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1248	<5	5	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1254	<5	5	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1260	<5	5	mg/kg	SW-846 8082	12/9/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	31		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	86		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Sample # 008
SAMPLE DESCRIPTION: 08: RED EPOXY FLOOR -2
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1221	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1232	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1242	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1248	<1	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1254	21	1	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1260	15	1	mg/kg	SW-846 8082	12/9/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	61		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	84		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 009
SAMPLE DESCRIPTION: 09: EXT. GASKET/GROMMET
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<4	4	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1221	<4	4	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1232	<4	4	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1242	<4	4	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1248	<4	4	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1254	<4	4	mg/kg	SW-846 8082	12/9/10	CBM
Aroclor-1260	<4	4	mg/kg	SW-846 8082	12/9/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	90		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	87		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Sample # 010
SAMPLE DESCRIPTION: 010: CAULK FRONT LOWER
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<10	10	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1221	<10	10	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1232	<10	10	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1242	<10	10	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1248	<10	10	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1254	57	10	mg/kg	SW-846 8082	12/10/10	CBM
Aroclor-1260	34	10	mg/kg	SW-846 8082	12/10/10	CBM
Surrogate			RANGE	SW-846 8082	12/9/10	CBM
Tetrachloro-m-xylene (TCMX)	73		30-150%	SW-846 8082	12/9/10	CBM
Decachlorobiphenyl	67		30-150%	SW-846 8082	12/9/10	CBM
Extraction date	Extracted			SW846 3540	12/7/10	DPR
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 011
SAMPLE DESCRIPTION: 011: RED FLOOR PAINT -1
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<9	9	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1221	<9	9	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1232	<9	9	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1242	<9	9	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1248	<9	9	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1254	240	9	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1260	58	9	mg/kg dry	SW-846 8082	12/10/10	RGM
Surrogate			RANGE	SW-846 8082	12/9/10	RGM
Tetrachloro-m-xylene (TCMX)	37		30-150%	SW-846 8082	12/9/10	RGM
Decachlorobiphenyl	91		30-150%	SW-846 8082	12/9/10	RGM
Extraction date	Extracted			SW846 3540	12/8/10	JEB
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Sample # 012
SAMPLE DESCRIPTION: 012: WHITE CEILING PAINT 3
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	8	1	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1254	87	5	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1260	18	5	mg/kg dry	SW-846 8082	12/10/10	RGM
Surrogate			RANGE	SW-846 8082	12/9/10	RGM
Tetrachloro-m-xylene (TCMX)	71		30-150%	SW-846 8082	12/9/10	RGM
Decachlorobiphenyl	94		30-150%	SW-846 8082	12/9/10	RGM
Extraction date	Extracted			SW846 3540	12/8/10	JEB
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 013
SAMPLE DESCRIPTION: 013: EXT. SPACER
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<2	2	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1221	<2	2	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1232	<2	2	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1242	<2	2	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1248	<2	2	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1254	<2	2	mg/kg dry	SW-846 8082	12/9/10	RGM
Aroclor-1260	4	2	mg/kg dry	SW-846 8082	12/9/10	RGM
Surrogate			RANGE	SW-846 8082	12/9/10	RGM
Tetrachloro-m-xylene (TCMX)	61		30-150%	SW-846 8082	12/9/10	RGM
Decachlorobiphenyl	86		30-150%	SW-846 8082	12/9/10	RGM
Extraction date	Extracted			SW846 3540	12/8/10	JEB
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Sample # 014
SAMPLE DESCRIPTION: 014: CONTOUR PAINT WHITE -2
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	1200	400	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1221	<400	400	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1232	<400	400	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1242	<400	400	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1248	<400	400	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1254	15000	400	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1260	7900	400	mg/kg dry	SW-846 8082	12/10/10	RGM
Surrogate			RANGE	SW-846 8082	12/9/10	RGM
Tetrachloro-m-xylene (TCMX)	51		30-150%	SW-846 8082	12/9/10	RGM
Decachlorobiphenyl	210*		30-150%	SW-846 8082	12/9/10	RGM
Extraction date	Extracted			SW846 3540	12/8/10	JEB
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Method 8082:
* Surrogate is outside QC Range due to the sample matrix.

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 015
SAMPLE DESCRIPTION: 015: YELLOW MONO ROLL -2
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<1	1	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1221	<1	1	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1232	<1	1	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1242	<1	1	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1248	<1	1	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1254	<1	1	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1260	2	1	mg/kg dry	SW-846 8082	12/10/10	RGM
Surrogate			RANGE	SW-846 8082	12/10/10	RGM
Tetrachloro-m-xylene (TCMX)	70		30-150%	SW-846 8082	12/10/10	RGM
Decachlorobiphenyl	106		30-150%	SW-846 8082	12/10/10	RGM
Extraction date	Extracted			SW846 3540	12/8/10	JEB
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

Sample # 016
SAMPLE DESCRIPTION: 016: ELEV. FRAME -1
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<100	100	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1221	<100	100	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1232	<100	100	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1242	<100	100	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1248	<100	100	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1254	3100	100	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1260	1500	100	mg/kg dry	SW-846 8082	12/10/10	RGM
Surrogate			RANGE	SW-846 8082	12/10/10	RGM
Tetrachloro-m-xylene (TCMX)	39		30-150%	SW-846 8082	12/10/10	RGM
Decachlorobiphenyl	51		30-150%	SW-846 8082	12/10/10	RGM
Extraction date	Extracted			SW846 3540	12/8/10	JEB
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

R.I. Analytical (EAM Division)
Date Received: 12/2/10
Work Order #: 1012-23784

PROJECT #100843 CHELSEA HEADWORKS

Sample # 017
SAMPLE DESCRIPTION: 017: EXT. YELLOW GARAGE DOOR
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/01/2010

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
PCB						
Aroclor-1016	<40	40	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1221	<40	40	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1232	<40	40	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1242	<40	40	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1248	<40	40	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1254	630	40	mg/kg dry	SW-846 8082	12/10/10	RGM
Aroclor-1260	1000	40	mg/kg dry	SW-846 8082	12/10/10	RGM
Surrogate			RANGE	SW-846 8082	12/10/10	RGM
Tetrachloro-m-xylene (TCMX)	32		30-150%	SW-846 8082	12/10/10	RGM
Decachlorobiphenyl	73		30-150%	SW-846 8082	12/10/10	RGM
Extraction date	Extracted			SW846 3540	12/8/10	JEB
Moisture	Not Applicable		%	SM2540 G.	12/8/10	KAC